Ordering number: EN 5146

Monolithic Linear IC

LA7833

Color TV Vertical Deflection Output Circuit

Overview

The LA7833 is a monolithic linear IC for vertical deflection output for large color television sets that requires few external components and dissipates little power. When used in conjunction with the LA7620 series of video chroma deflection ICs, the LA7800 series of deflection ICs, and the LA7850 series of display ICs, it is possible to create a stable and compact vertical output deflection circuit.

Features

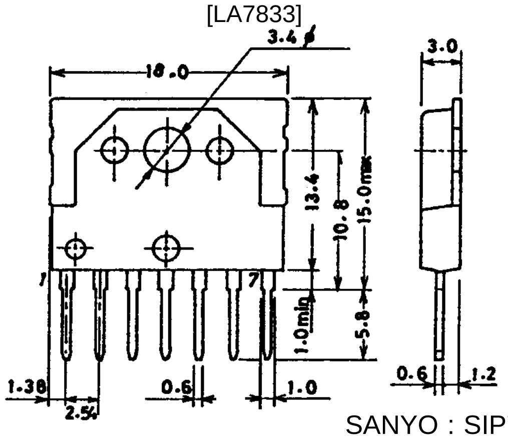
- High output.
- Low power dissipation due to built-in pump-up circuit.
- Few external components needed.
- Thermal protection circuit built in.

Package Dimensions

unit : mm

3075-SIP7H

[LA7833]



SANYO : SIP7H

Specifications

Maximum Ratings at Ta = 25 °C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_6 max	(Pump-up block)	30	V
	V_3 max	(Output block)	62	V
Deflection output current	I_2 max		±1.5	Ap-o
Allowable power dissipation	Pd max	With arbitrarily large heat sink	8.0	W
Operating temperature	Topr		–20 to +85	°C
Storage temperature	Tstg		–40 to +150	°C
Thermal resistance	θj-c		4	°C/W

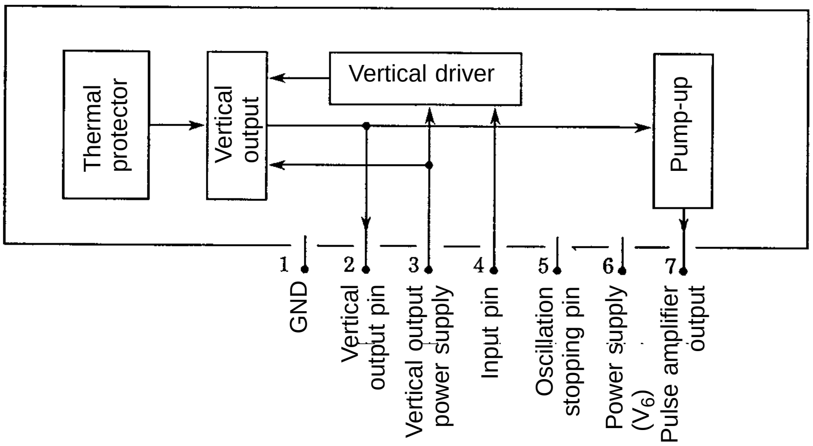
Operating Conditions at Ta = 25 °C

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_6		24	V
Operating supply voltage range	V_6		10 to 27	V
Deflection output current	I_2p-p		to 2.2	Ap-p

Operating Characteristics at Ta = 25 °C, V_6 = 24 V

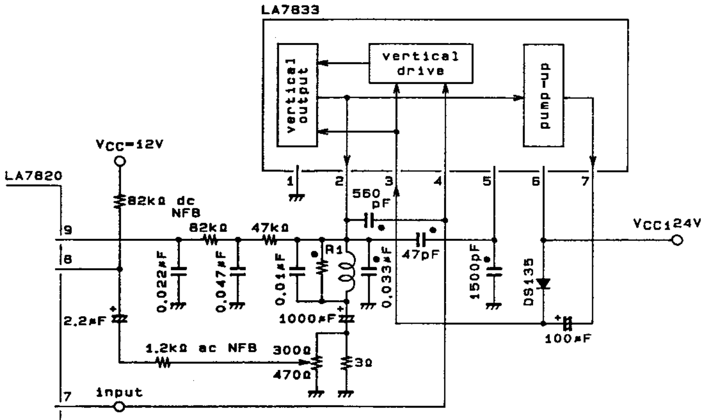
Parameter	Symbol	Conditions	min	typ	max	Unit
Deflection output saturation voltage (lower)	$V_{(sat)2-1}$	I_2 = +1.1 A			1.5	V
Deflection output saturation voltage (upper)	$V_{(sat)3-2}$	I_2 = –1.1 A			3.5	V
Pump-up charge saturation voltage	$V_{(sat)7-1}$	I_7 = +20 mA			1.8	V
Pump-up discharge saturation voltage	$V_{(sat)6-7}$	I_7 = –1.1 A			3.2	V
Idling current	I_{DL}		30		60	mA
Midpoint voltage	V_{MID}		9.5	10.5	11.5	V

Pin Assignment and Functional Block Diagram



Sample Application Circuit

LA7820 vertical output

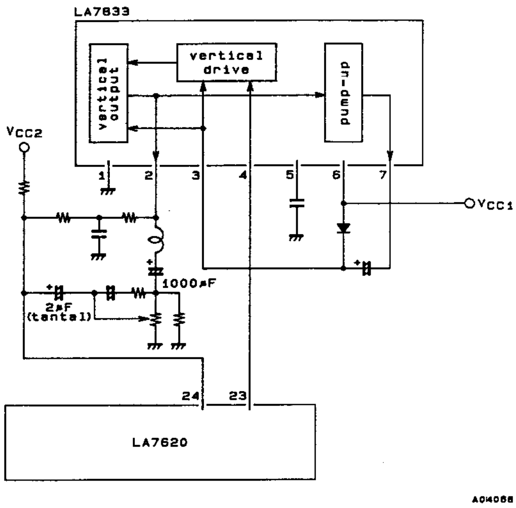


R1* = several hundreds of ohms to 1 kΩ
*: CR used against oscillation
The combination depends on the oscillation mode.

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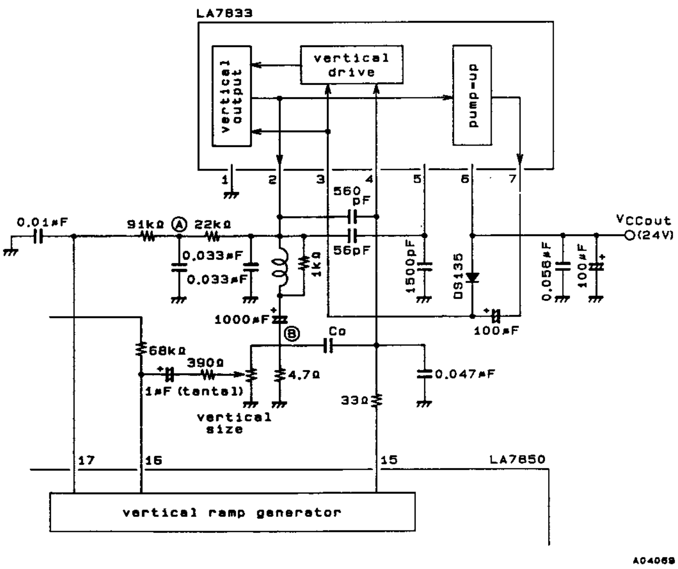
Sample Application Circuit

LA7620 vertical output

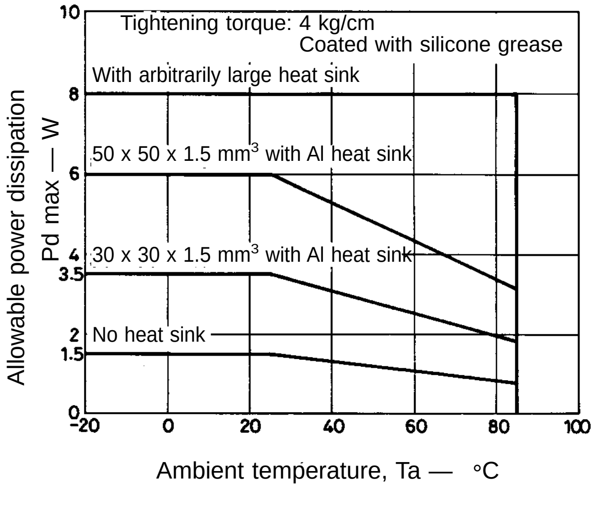


Sample Application Circuit

LA7850 vertical output



Pd max — Ta



This catalog provides information as of May, 1995. Specifications and information herein are subject to change without notice.